

Title: SYSTEMS AND METHODS ENABLING AUTOMATED RETURN TO AND/OR REPAIR OF DEFECTS WITH A MATERIAL PLACEMENT MACHINE

Inventors: Engelbart et al

Atty. Ref.: 7784-000624

Attorney Anthony G. Fussner (314) 726-7500

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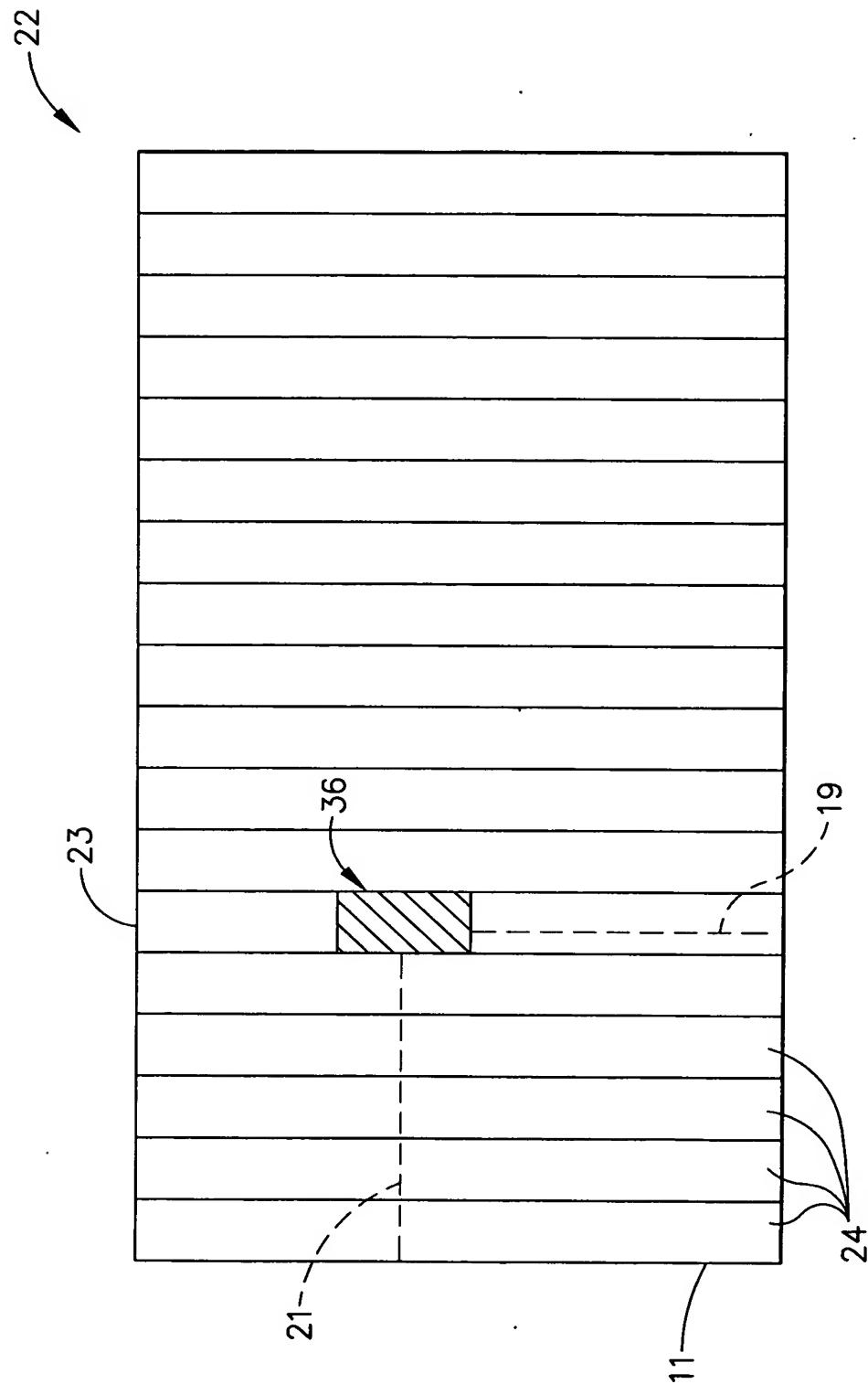
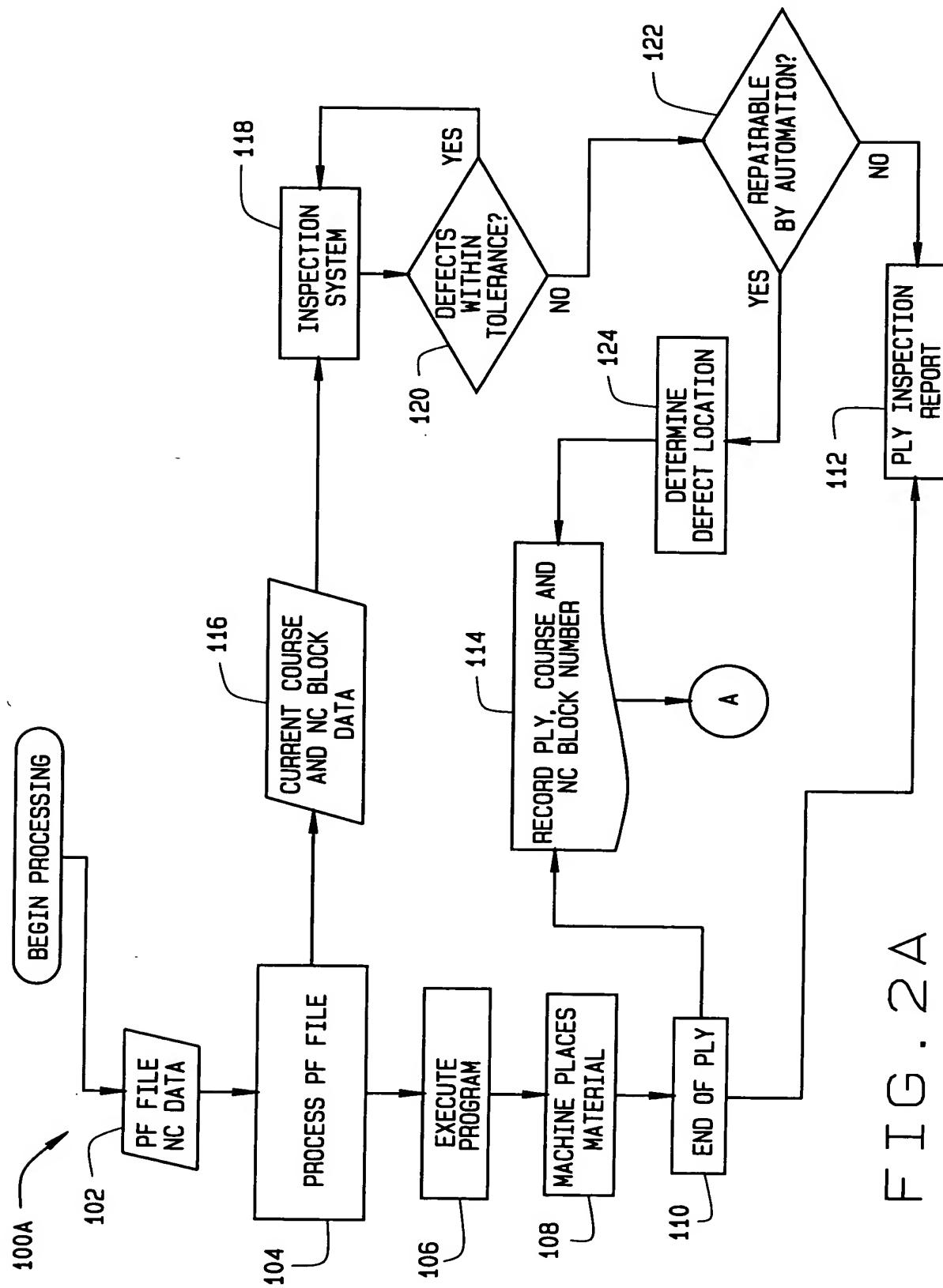
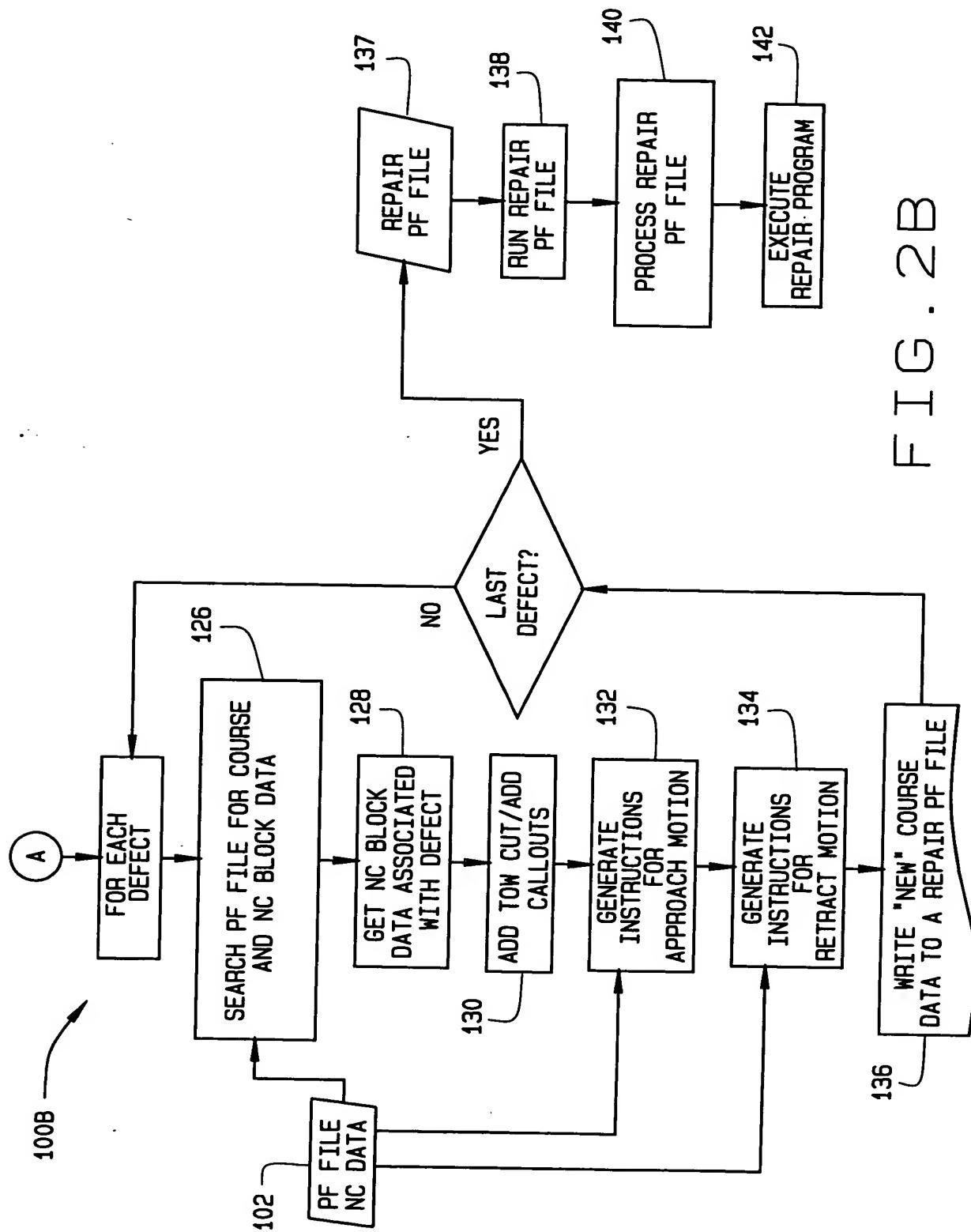


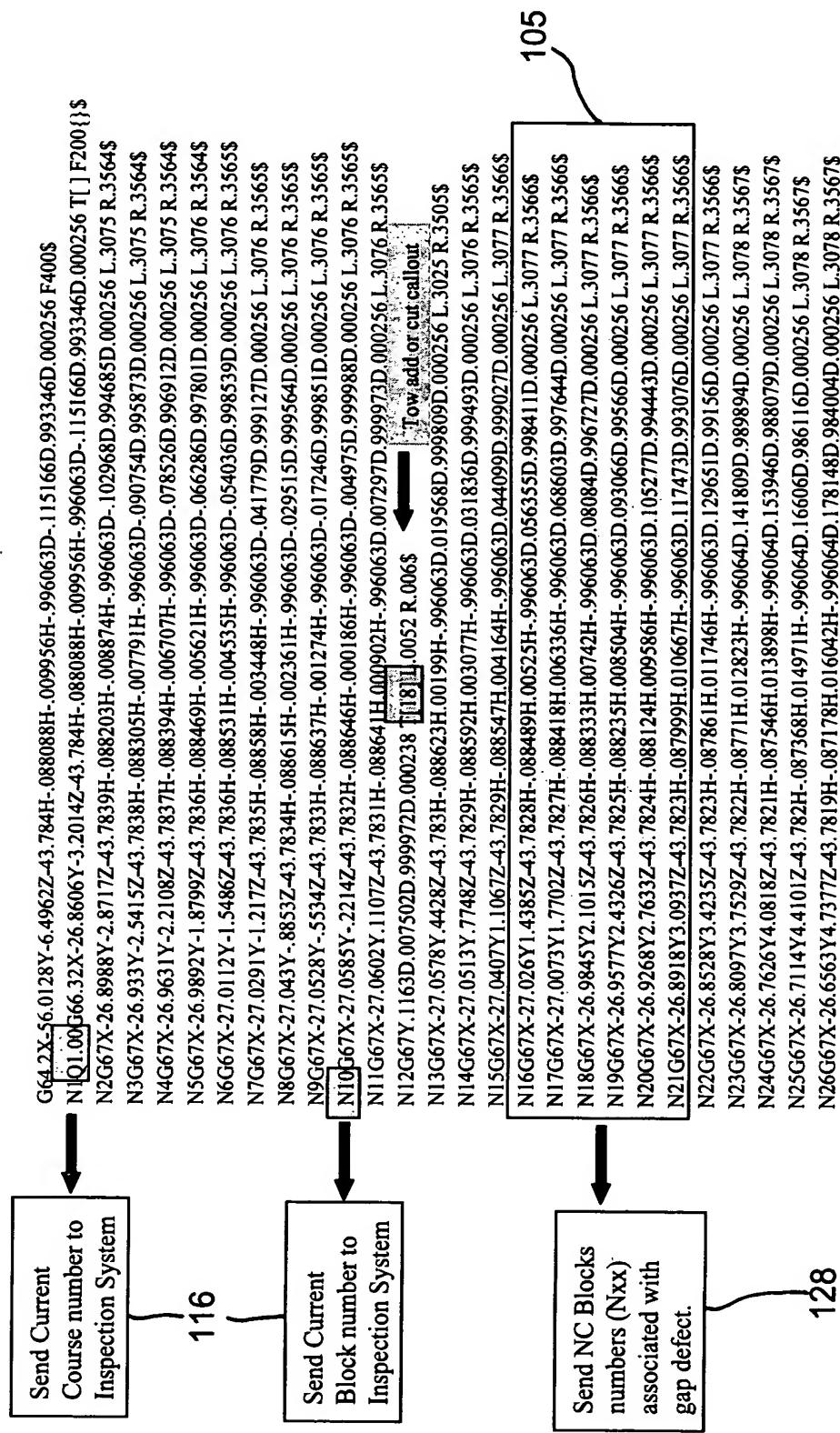
FIG. 1





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H Vector is the surface normal
D Vector is the path tangential vector

FIG. 3

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N79G67X-21.0014724.236Z-40.3284H-.523185H.02.5822H-.578467D.475303D.77768D.411462 T1 L2105 R.2278\$
N79G67X-20.9694724.3135Z-40.3008H-.520986H.626242H-.57996GD.476623D.777133D.410967L.0691 R.0748\$
N77G67X-20.7996724.6094Z-40.31683H-.510021H.6271664H-.588147D.482329D.77483D.408639 L.393 R.3871\$
N78G67X-20.5445725.0405Z-39.9483H-.495813H.627241H.600615D.49596D.772242D.397027L.5235 R.5492\$
N79G67X-20.1859125.6163Z-39.6704H-.489899H.6029116H.629676D.482231D.789137D.380416L.731 R.7635\$
N80G67X-19.8706726.1118Z-39.4231H-.471868H.602715H-.643487D.494341D.785198D.372949L.6196 R.6529\$
NBLG62X-.19.5431126.6058Z-39.1746H-.45330H.589345H-.658396D.494171D.785243D.372308L.6296R.6666\$
G64.4X-32.7956744.0512Z-39.1746H-.453301H.598345H-.658396D.494171D.785243D.37308 F400\$
G64.5X-46.0181Y29.97282-41.489H-.837933H.545777R0D.54577D.837933D0 F400\$
G64.5X-53.549Y12.1877Z-33.8034H-.083443H.019665H-.996149D-.288119D.996692D.043597F400\$
N1021.000G66.32X-24.3552Y5.4688Z-43.8034H-.083443H.019665H-.996149D-.288119D.996692D.043597 T1] F200 { }\$
N2067X-24.4574Y5.4687Z-43.7881H-.083193H.020711H-.996149D-.2763469D.960662D.043597 L.3321 R.3772\$
N3067X-24.556Y6.1503Z-43.7724H-.084658H.021753H-.996149D-.25775D.963379D.043597 L.3343 R.3794\$
N4067X-24.6511Y6.4967Z-43.7569H-.084658H.022793H-.996149D-.24575D.966549D.043596 L.3364 R.3816\$
N5067X-24.7427Y6.8466Z-43.741H-.084371H.023829H-.996149D-.240891D.969373D.043596 L.3386 R.3839\$
N6067X-24.8305Y7.2001Z-43.7251H-.084072H.024862H-.99615D-.228993D.972451D.043597 L.3407 R.3861\$

→ Retract and Approach motion between courses.

FIG. 4

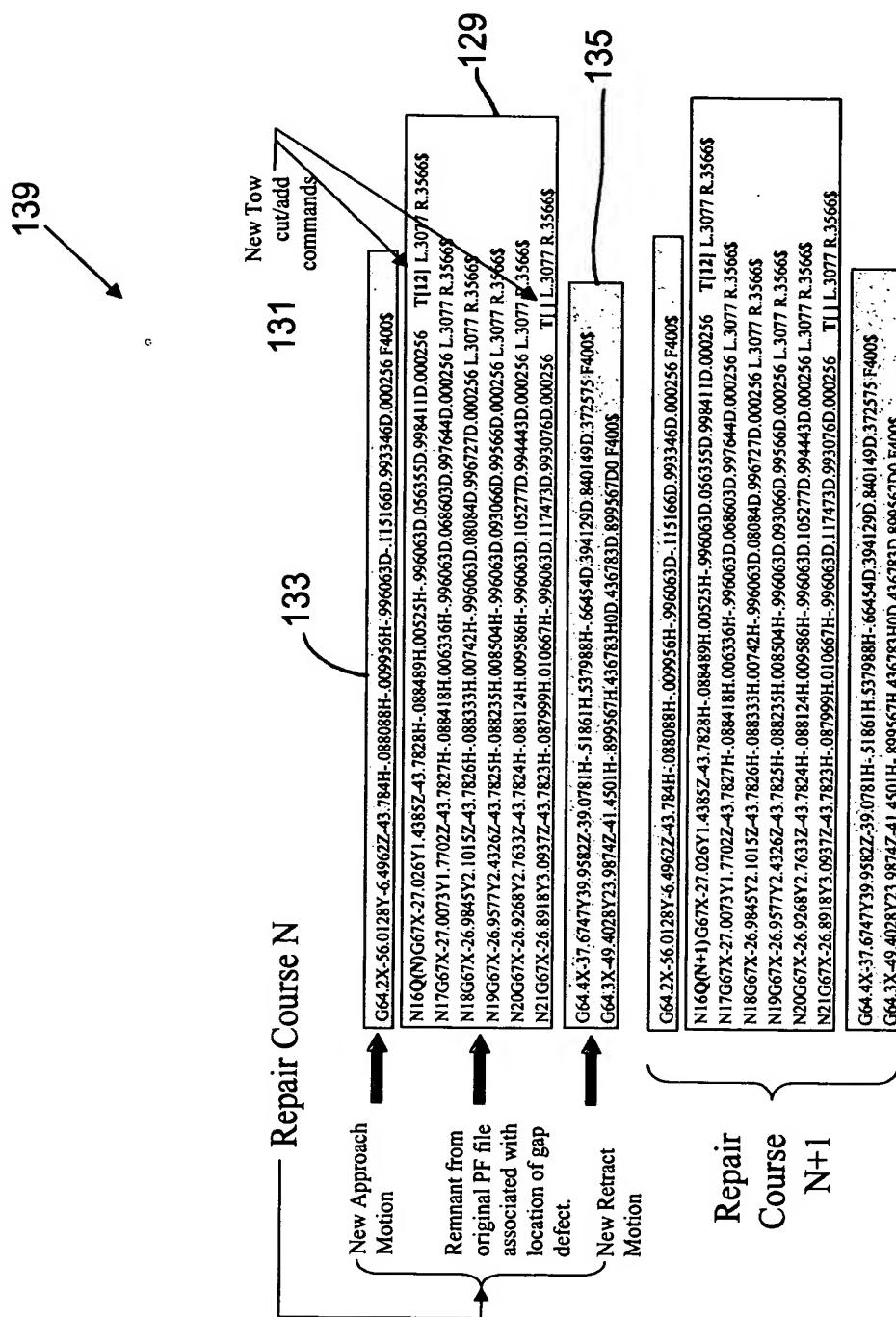


FIG. 5

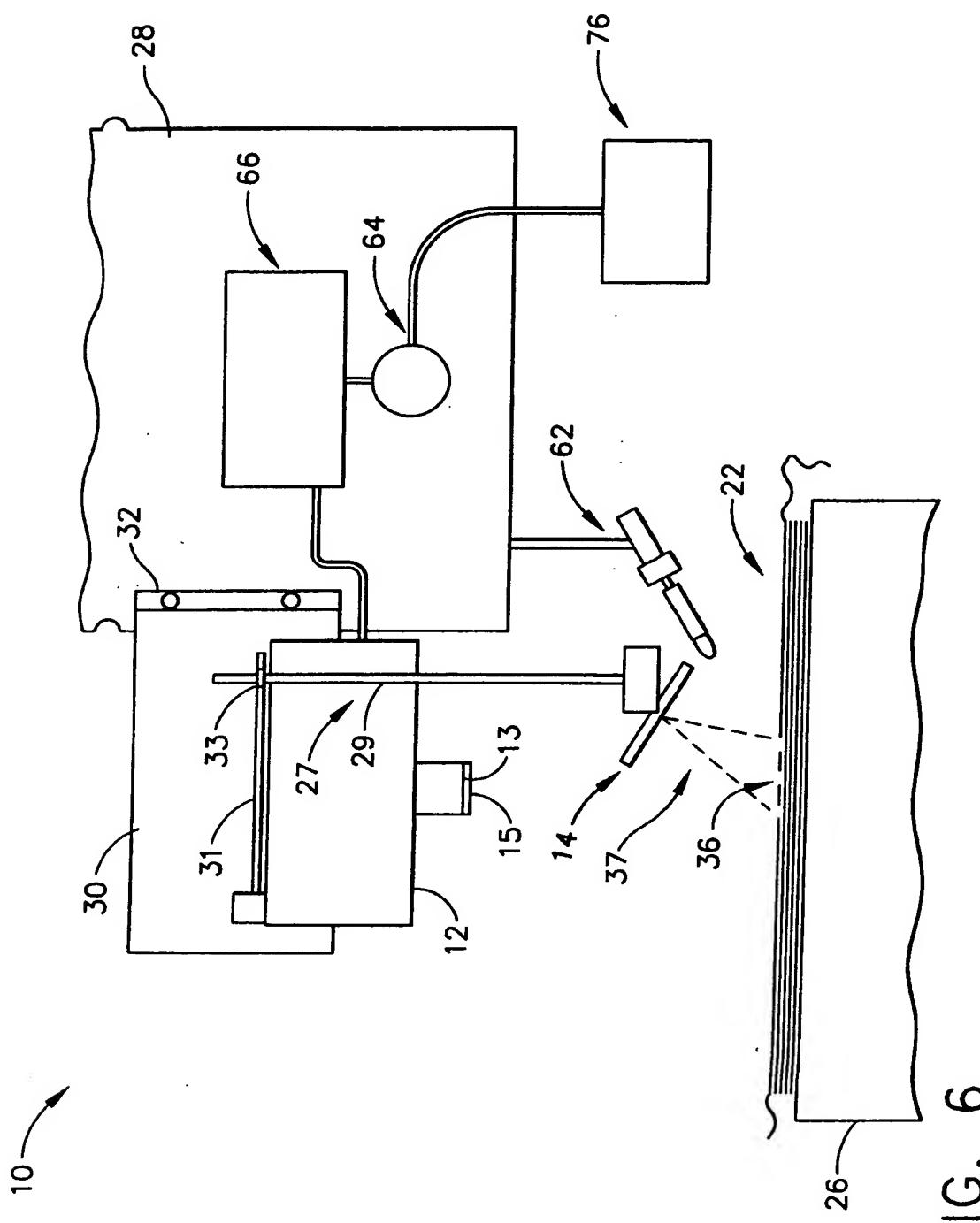


FIG. 6

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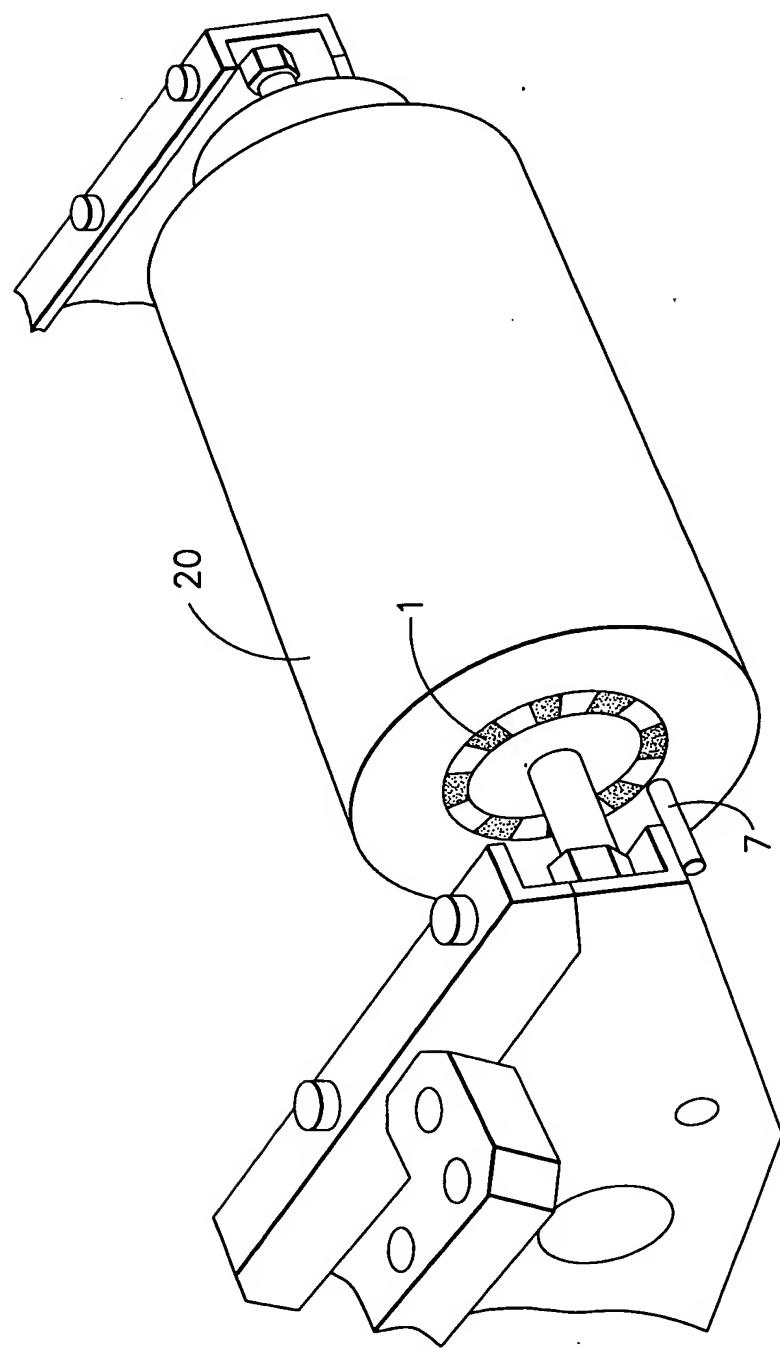


FIG. 7

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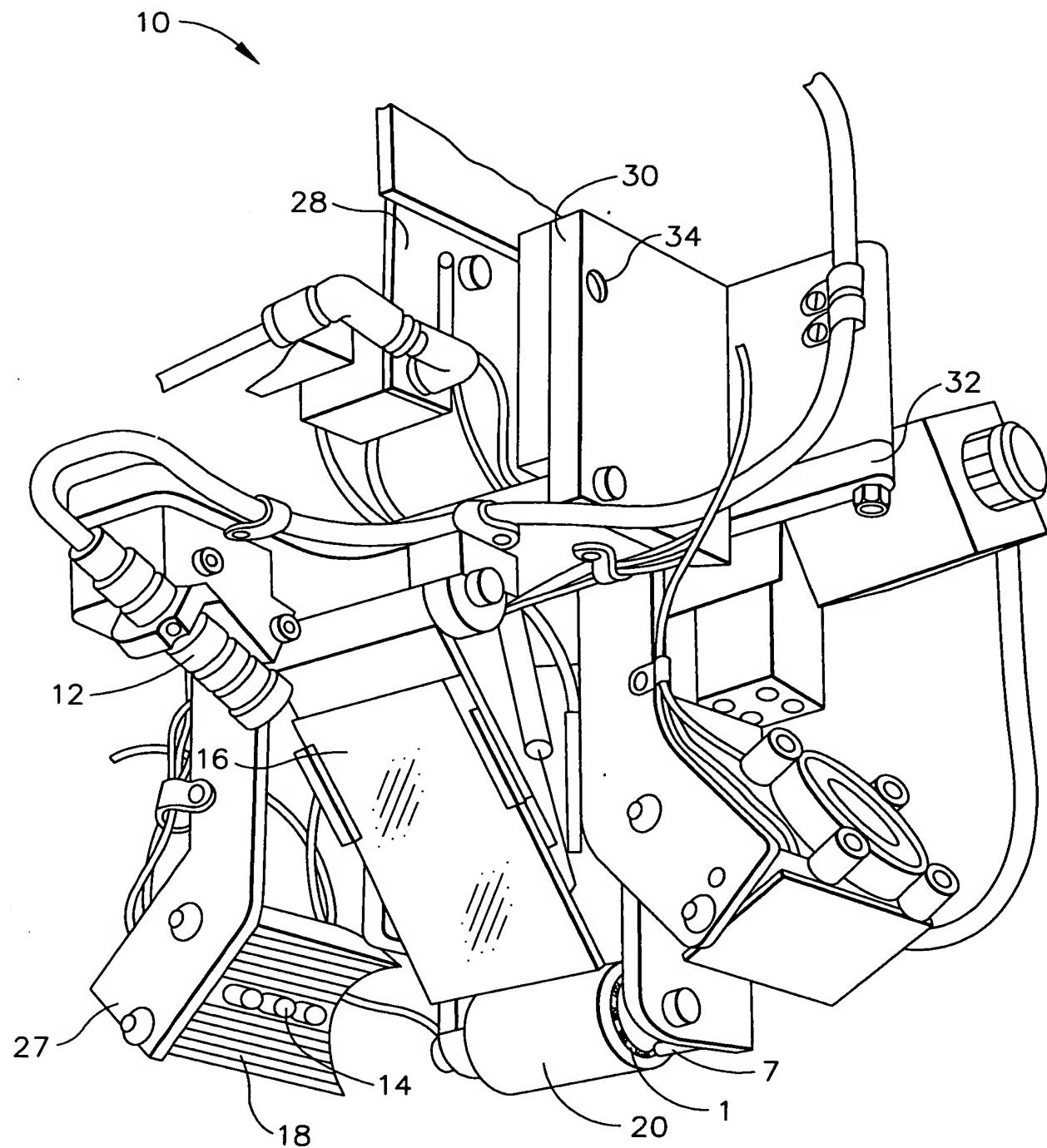


FIG. 8

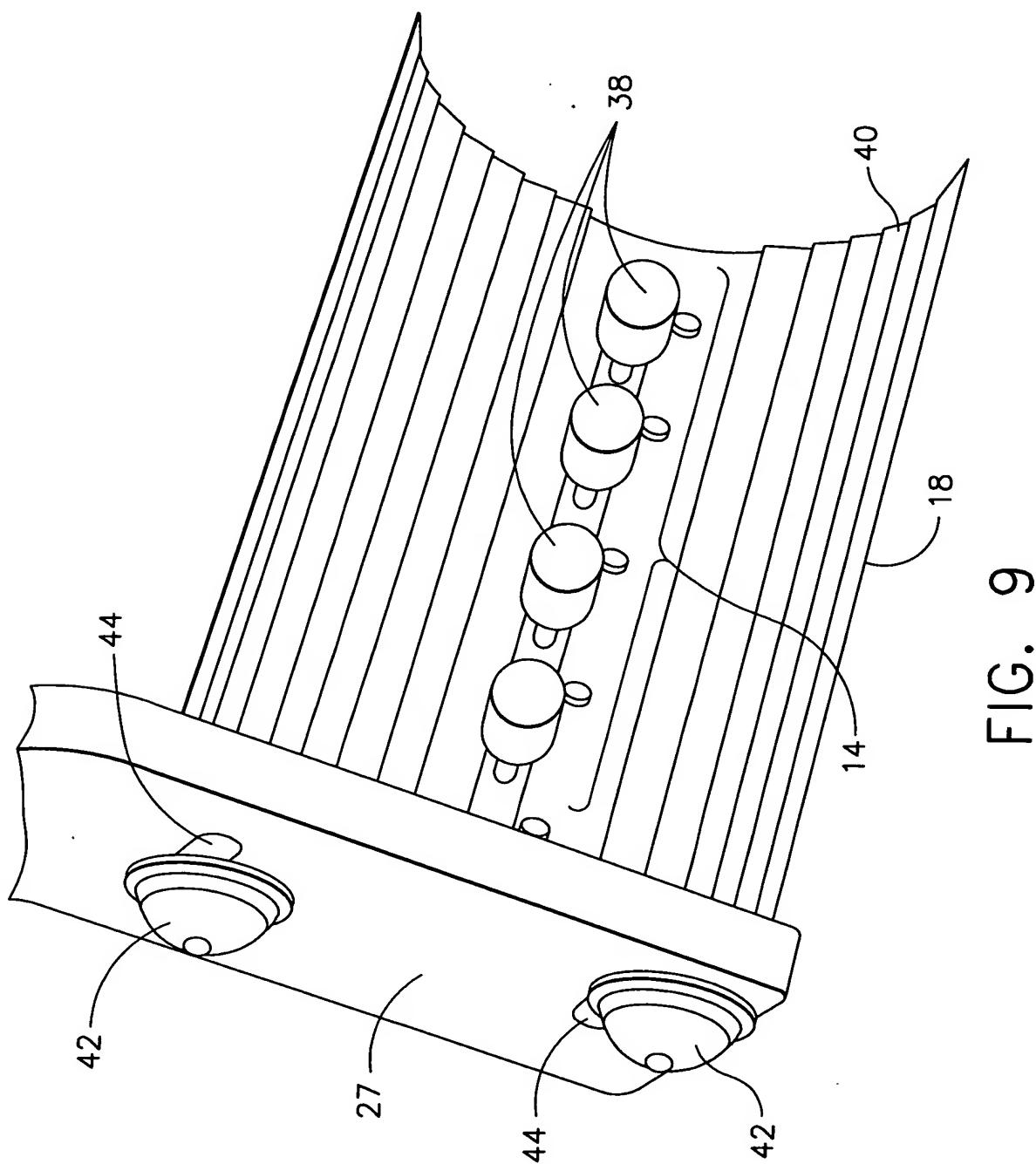
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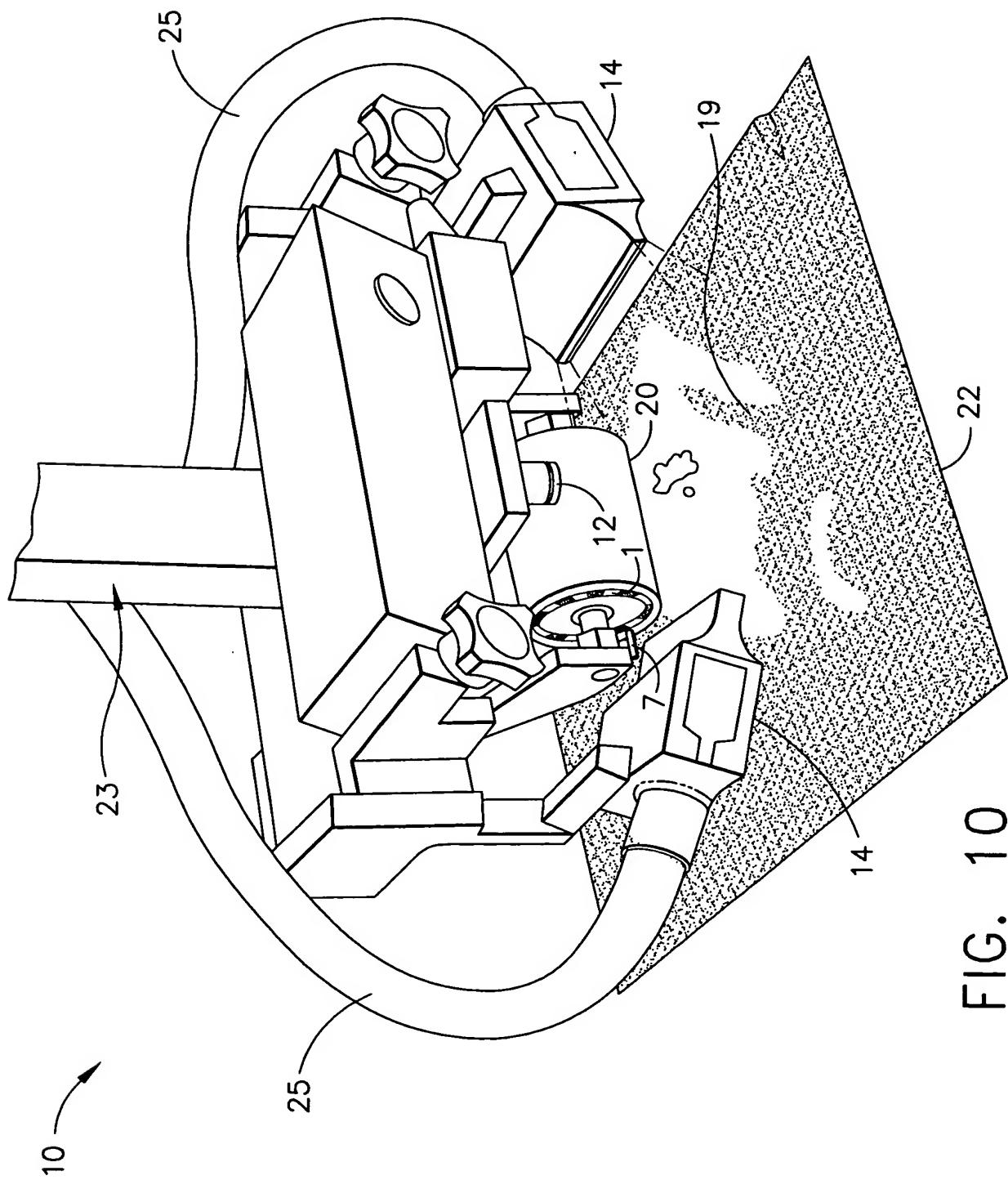


FIG. 10

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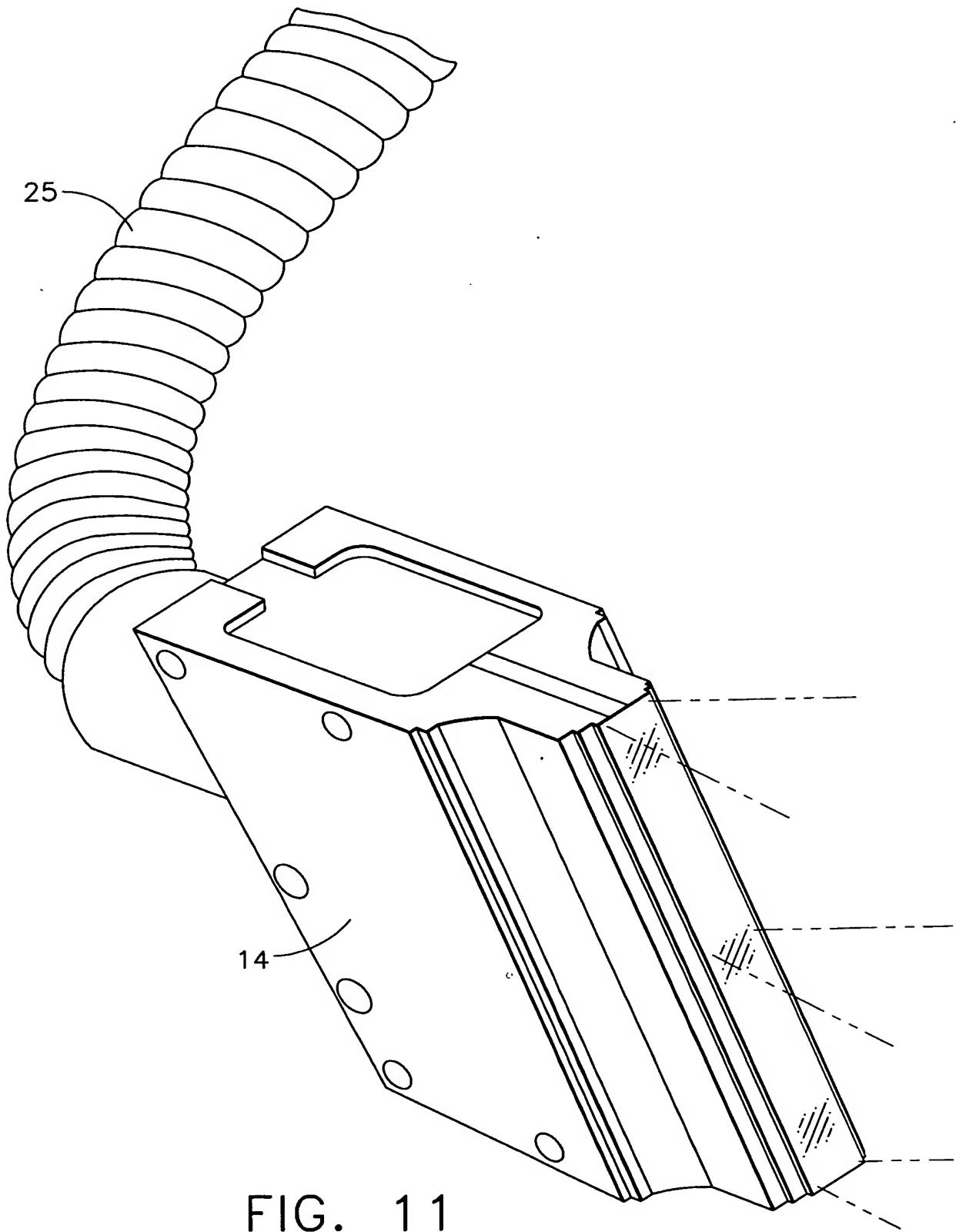


FIG. 11

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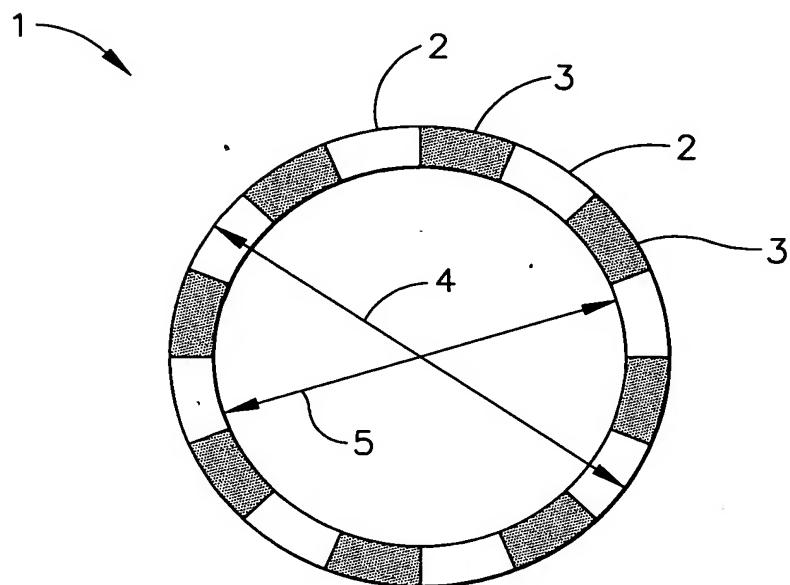


FIG. 12